

**UNITED STATES DEPARTMENT OF COMMERCE****United States Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS
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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/212,210 12/16/98 TRAN

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EXAMINER

WILLIAMS & ASSOCIATES
1030 15TH STREET N.W.
SUITE 300
WASHINGTON DC 20005-1501

COUSO, J

| ART UNIT | PAPER NUMBER |
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2621

11

DATE MAILED:

07/16/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

| | | |
|-----------------------|------------------------|--|
| Application No. | Applicant(s) | |
| 09/212,210 | | |
| Examiner J.L. Guro | Group Art Unit 2621 | |

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- Responsive to communication(s) filed on 6/8/01.
- This action is **FINAL**.
- Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- Claim(s) 1 - 15 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- Claim(s) 2 - 8, 11 and 13 - 15 is/are allowed.
- Claim(s) 1, 9 - 10 and 12 is/are rejected.
- Claim(s) _____ is/are objected to.
- Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- The proposed drawing correction, filed on _____ is approved disapproved.
- The drawing(s) filed on _____ is/are objected to by the Examiner.
- The specification is objected to by the Examiner.
- The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- All Some* None of the CERTIFIED copies of the priority documents have been received.
- received in Application No. (Series Code/Serial Number) _____.
- received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Attachment(s)

- Information Disclosure Statement(s), PTO-1449, Paper No(s). _____ Interview Summary, PTO-413
- Notice of Reference(s) Cited, PTO-892 Notice of Informal Patent Application, PTO-152
- Notice of Draftsperson's Patent Drawing Review, PTO-948 Other _____

Office Action Summary

Art Unit: 2621

1. Applicant's arguments with respect to claims 1, 9-10 and 12 have been considered but are moot in view of the new ground(s) of rejection.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 9-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lolarov et al. (U.S. Patent No. 6,144,773) in view of Resnikoff et al. (U.S. Patent No. 5,081,645).

With regard to claim 1, Kolarov describes an apparatus for block encoding of windows of digitally represented images comprising a chain of lattices of lapped transforms with lifting steps (see figures 3a-b and refer for example to column 13, lines 1-20 and column 13, lines 48-55). Although the Kolarov reference does not disclose using dyadic rational lifting steps such a method is well known and widely utilized in the prior art.

Resnifoff discloses a novel spread spectrum codec apparatus and method which provides for using dyadic rational lifting steps (refer for example to column 14, lines 30-39).

Given the teachings of the two references and the same environment of operation, that of block encoding, one of ordinary skill in the art at the time the invention was made would have been led in an obvious fashion to provide for using dyadic rational coding as taught by Resnikoff in the Kolarov system for the coding in the lifting steps therein. This is a routine design choice, that of substituting one well known coding method for another, which fails to patentably distinguish over the prior art absent some novel and unexpected result.

In regard to claim 9, Kolarov describes an apparatus for transforming $M \times M$ blocks of digital image intensities comprising lapped transforms with overlapping factor K and having butterfly structures and lifting steps to generate M -channel uniform linear phase perfect reconstruction filter banks (see figures 3a-b and refer for example to column 13, lines 1-20 and column 13, lines 48-55). Although the Kolarov reference does not disclose using dyadic rational lifting steps such a method is well known and widely utilized in the prior art.

Resnifoff discloses a novel spread spectrum codec apparatus and method which provides for using dyadic rational lifting steps (refer for example to column 14, lines 30-39).

Given the teachings of the two references and the same environment of operation, that of block encoding, one of ordinary skill in the art at the time the invention was made would have been led in an obvious fashion to provide for using dyadic rational coding as taught by Resnikoff in the Kolarov system for the coding in the lifting steps therein. This is a routine design choice, that of substituting one well known coding

method for another, which fails to patentably distinguish over the prior art absent some novel and unexpected result.

With regard to claim 10, Kolarov describes K to be equal 2 (see figures 3a-b and refer for example to column 13, lines 1-20 and column 13, lines 48-55).

In regard to claim 12, Kolarov describes a method of block coding windows of digitally represented images comprising successive steps of processing the output of each step through a following step in a chain of lattices of lapped transforms with lifting steps (see figures 3a-b and refer for example to column 13, lines 1-20 and column 13, lines 48-55). Although the Kolarov reference does not disclose using dyadic rational lifting steps such a method is well known and widely utilized in the prior art.

Resnifoff discloses a novel spread spectrum codec apparatus and method which provides for using dyadic rational lifting steps (refer for example to column 14, lines 30-39).

Given the teachings of the two references and the same environment of operation, that of block encoding, one of ordinary skill in the art at the time the invention was made would have been led in an obvious fashion to provide for using dyadic rational coding as taught by Resnikoff in the Kolarov system for the coding in the lifting steps therein. This is a routine design choice, that of substituting one well known coding method for another, which fails to patentably distinguish over the prior art absent some novel and unexpected result.

5. Claims 2-8, 11 and 13-15 are allowed.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Li, Li et al. ('981) and ('771), Zandi et al., Kovacevic et al., Goyal and Sweldens all disclose systems similar to applicant's claimed invention. Liang et al. has been submitted by the inventor at the interview and is hereby made of record.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jose L. Couso whose telephone number is (703) 305-4774. The examiner can normally be reached on Monday through Friday from 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached on (703) 305-4706. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-8576.

jlc
July 9, 2001



JOSÉ L. COUSO
PRIMARY EXAMINER